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PATENT

REMARKS

Claims 2-8, 10-18, and 20-29 are pending, and claims 14, 15, 17, 18, 20, 21, and 24 are withdrawn from consideration at this time. Each of the withdrawn claims is amended herein to change its dependency from a cancelled claim to a pending claim.

The following remarks are responsive to the Office action dated December 23, 2004.

CLAIM 27

Claim 27 requires, among other things, a multi-directional loop fastening component wherein "the loop fastening component and the hook fastening component provide shear strength values of less than 3900 grams in each of said first and second directions". As indicated at page 37, lines 26-28, the applicants' claimed invention provides a stretch loop system that can perform as well as non-stretch loop systems at lower shear strengths (i.e., 1,500-3,900 grams versus 4,000-5,000 grams). Lower shear strengths are advantageous in that they inhibit, in the case of a diaper, the delamination of other components. Delamination occurs when the engagement strength between the fastening components is greater than the bonds holding the diaper components together. Thus, using fastening components with lower shear strength values makes the diaper less likely to fail. In addition, lower shear strength allows the user to more easily disengage the hoop fastener from the loop fastener thereby making the fastener more user friendly. Moreover, hook and loop fasteners with lower shear strength values are typically less expensive than those with higher strengths. For example, the fasteners can be made with fewer loops and/or hooks or otherwise provide less engagement. Thus, fastening components with less shear strength are more economical to manufacture.

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The Examiner recognizes that U.S. Patent No. 5,547,531 (Allen) is completely silent with regard to this feature. See page 4, lines 5-7 of the Office action. Instead, the Examiner relies on United States Court of Customs and Patent Appeals decisions (i.e., *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955) and *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) in finding that "it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller* at 456.

In *In re Aller*, unlike the present case, the cited prior art disclosed ranges for temperature and acid concentrations, though different from those claimed by *Aller*. The Court clearly points this out in stating that "[t]he process of appellants is identical with that of the prior art, except that appellants' claims specify lower temperatures and higher sulphuric acid concentrations than are shown in the references." *In re Aller* at 455. As also explained in M.P.E.P. §2144.05 (II) (A), *Aller*'s "[c]laimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be *prima facie* obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%". Emphasis added. Thus, the issue before the Court was "whether the changes in temperature and in acid concentration amount to invention, or whether such changes would have been obvious to one skilled in the art." *In re Aller* at 455. The Court held that one skilled in the art would take the prior art teachings and experiment with the temperature and acidity to find the most productive conditions. *In re Aller* at 458. Accordingly, the Court's holding in *In re Aller* is limited to the situation where the prior art teaches the claimed invention but with ranges different than those claimed, and wherein one of

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ordinary skill in the art would find it obvious to experiment with the taught ranges in developing the claimed invention.

The Examiner's rejection of Applicants' claims is an improper extension of the Court's holding in *In re Aller*. Allen, unlike the prior art reference in *In re Aller*, fails altogether to disclose a value or a range for the shear stress provided by the hook and loop fastening components. Thus, the Examiner's rejection of claim 27 improperly extended the Court's holding in *In re Aller* and should be withdrawn.

The Examiner provides on page 4 of the Office action the first sentence of M.P.E.P §2144.05(II) (B), which cites *In re Antonie*. However, the Examiner does not explain how *In re Antonie* is applicable to the case in hand and therefore, clearly does not establish a *prima facie* case of obviousness based on *In re Antonie*.

In *In re Antonie*, Antonie claimed a wastewater treatment device having a tank volume to contactor area of 0.12 gal/sq.ft. *In re Antonie* at 619. According to Antonie's specification, a contactor area of 0.12 gal/sq.ft is optimum because lower contactor area values reduce treatment capacity while greater values contactor area provide the same treatment capacity but at a higher cost. *Id.* The Examiner rejected the inventor's claims as an obvious optimization of ranges in view of prior art that taught the basic tank device along with a general statement that "efficiency" in terms of "purity of output" could be increased to 95% by increasing the area of the contactor. *Id.* The prior art did not disclose any quantitative design parameters except for one example, which did not specify a tank volume. *Id.* The CCPA reversed the rejection, holding that it is impossible to recognize from the prior art teaching that "treatment capacity"

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is a function of the tank-volume-to-contactor area ratio. *Id.* at 620. According to the court, in order for a claim to be a result-effective variable the prior art must recognize that the particular parameter affected the result. *Id.*

In this case, the Office cites no reason as to why the loop fastening component and the hook fastening component provide shear strength values of less than 3900 grams in each of the first and second directions, as required by claim 27, is an obvious adaptation of a result-effective variable employed in the fastening device disclosed by Allen. In fact, Allen, analogous to the prior art in *in re Antonie*, did not recognize that the particular parameter (i.e., shear stress) could be minimized. Instead, Allen teaches away from minimizing shear stress. At column 12, lines 53-62, Allen discloses that in "an especially preferred embodiment of the disposable diaper 50...the filaments 36 provide the maximum peel and shear force resistance." Emphasis added. Thus, Allen teaches that the shear stress should be maximized, not minimized. However, Applicants claimed invention requires that the shear strength values are less than 3900 grams.

Accordingly, claim 27 is patentable over Allen and the other reference of record since they fail to show or suggest a multi-directional loop fastening component wherein the loop fastening component and the hook fastening component provide shear strength values of less than 3900 grams in each of said first and second directions.

Claims 2-8 depend directly or indirectly from claim 27 and are submitted to be patentable over the references of record for the same reasons as claim 27. In addition, claims 5-7 specify lower shear strengths of the hook material. Allen and the other references of record lack disclosure or suggestion of the use of

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such low shear strength material as a garment loop fastener component.

CLAIM 28

Claim 28 includes the same requirements that distinguish claim 27 from the art of record. Accordingly, claim 28 is patentable for the same reasons as claim 27. Claims 10-13 and 16 depend directly or indirectly from claim 28 and are submitted to be patentable over the references of record for the same reasons as claim 28. In addition, claims 10-12 specify lower shear strengths of the hook material. Allen and the other references of record lack disclosure or suggestion of the use of such low shear strength material as a garment loop fastener component.

CLAIM 29

Claim 29 includes the same requirements that distinguish claim 27 from the art of record. Accordingly, claim 29 is patentable for the same reasons as claim 27. Claims 22, 23, 25 and 26 depend directly or indirectly from claim 29 and are submitted to be patentable over the references of record for the same reasons as claim 29. In addition, claims 22 and 23 specify lower shear strengths of the hook material. Allen and the other references of record lack disclosure or suggestion of the use of such low shear strength material as a garment loop fastener component.

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CONCLUSION

In view of the foregoing, applicants respectfully request favorable consideration and allowance of claims 2-8, 10-18, and 20-29 as now presented.

Respectfully submitted,



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